

REMARKS

In view of the Appeal Brief filed on August 18, 2008, the examiner has reopened prosecution.

Claims 1-8, 10, 12-13, 22 and 25-29 are pending.

Claims 1 and 26 have been amended for purpose of clarification. Support for the foregoing amended may be found on page 7, lines 5-6. No new matter has been added. Entry is requested.

Claims 1-5, 8, 10, 12-13, 22 and 25-27 are rejected under 35 U.S.C. § 103 (a) as being obvious over Mehaffy et al. (EP 0934990A1). It is the examiner's position that paragraph [0033] of Mehaffy discloses an adhesive that is applied at 200°F, wherein the heat stress value is separated by 90°F or less from the application temperature. Examiner notes that the adhesive can be applied at 200°F and that a bond formed by two pieces of corrugated case substrate held together by a ½" by 2" compressed beam can maintain a cantilever stress load of 2 to 2.5 psi for 24 hours at temperatures at or above 115°F (interpreted as heat stress value). The examiner further notes that Mehaffy discloses a hot melt adhesive that is substantially similar to the instant adhesive (paragraphs [0009-0018, 0029]). Hence, the examiner urges that it would have been obvious to a skilled artisan that Mehaffy's viscosity of the hot melt adhesive at 200 °F is within the applicant's claimed range because Mehaffy's adhesive is substantially similar to the adhesive disclosed by the applicant.

Applicants disagree.

Mehaffy fails to teach or suggest an adhesive applied at a temperature of below 250°F

which has a bonded heat stress value that is separated from the application temperature by not more than 100°F, as required in applicants' claim 1, let alone an adhesive that is applied at a temperature of about 200°F, as required in applicants' claim 2, or an adhesive that is applied at or below 200, as required in applicants' claim 3. The instant adhesive has a viscosity of from about 800 to 1500 cps at the adhesive application temperature, the application temperature is below 250°F and the difference between the adhesive application temperature and the adhesive heat stress value ("delta") is 100°F or less. As illustrated in Table 2, page 20 of the specification, the viscosity is below 1500 cps at the application temperature of 200°F and the delta is below 100°F for all Samples 1-10.

The Examiner's position that Mehaffy discloses the *substantially similar* as the instant application and thus will be capable of being applied at less than 250°F, with a viscosity within applicants' claimed range at a temperature of below 250°F and a heat stress value that is separated from the application temperature by less than 100°F is without merit. Although Mehaffy teaches that the adhesive application temperature may be 200-300°F and the heat stress value is at or above 115°F, it fails to teach that the delta is at or below 100°F. To demonstrate this, the applicants have prepared Tables A and B.

In Table 1 of page 7, Mehaffy exemplifies Samples I, II, III, A and B have a viscosity range of 1155-1435 cP at 250°F. The heat stress value is reported as 115-125°F. At this application temperature, Mehaffy's adhesive has the viscosity range as the instant adhesive, however, the delta is greater than 100°F. This distinction is reported in the following Table A.

Table A

	I	II	III	A	B
Appli Temp 250°F	1205 cp	1245 cp	1435 cp	1155 cp	1180 cp
Heat Stress (°F)	125°F	120°F	115°F	125°F	120°F
Delta	125°F	130°F	135°F	125°F	130°F

Moreover, Mehaffy's adhesive would not have the viscosity range of from about 800 to 1500 cps at application temperatures below 250°F. It is well known in the art that as for every increment of 25°F decrease of the application temperature, the viscosity of the hot melt adhesive increases about 40%. The calculated viscosity values at 225°F and 250°F are reported in Table B. Accordingly, if Mehaffy's adhesives were to be applied at 225°F, the viscosity range would be greater than about 1600 cps. If Mehaffy's adhesives were applied at 200°F, as exemplified in the instant invention, the viscosity range would be greater than about 2200 cps. At these high viscosity values, a skilled artisan would be led away from utilizing such adhesive on hot melt adhesive equipment/machinery, for majority of commercially employed hot melt application equipment requires a viscosity of below about 1500 cps (instant specification at page 5, lines 15-17). Use of an adhesive with higher viscosity would lead to stringing of the adhesive for the nozzles and improper amount or control of adhesive transfer to the substrate (page 5, lines 18-19). Hence, one skilled in the art would not look to Mehaffy to develop an adhesive that can be applied at temperature below 250°F.

Table B

	I	II	III	A	B
Appli Temp 250°F	1205 cp	1245 cp	1435 cp	1155 cp	1180 cp
Appli Temp 225°F	1687 cp	1743 cp	2009 cp	1617 cp	1652 cp
Appli Temp 200°F	2362 cp	2440 cp	2813 cp	2264 cp	2313 cp

In contrast to Mehaffy's adhesives, applicants' have shown that adhesives can be formulated that can maintain a temperature separation of 100°F or less between the application temperature and the adhesive heat stress value.

Withdrawal of the Section 103 rejections of the claims 1-5, 8, 10, 12-13, 22 and 25-27 over the Mehaffy reference is requested.

Claims 6 and 7 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over Mehaffy et al. in view of Baetzold et al. (U.S. 5,827,913). It is the examiner's position that Mehaffy discloses a hot melt adhesive as stated above, and further discloses that "other additives" can be added depending on the end use of the adhesive. The examiner acknowledges that Mehaffy is silent as to the additives as being a fragrance or an energy-absorbing ingredient. The examiner cites Baetzold as disclosing a hot melt adhesive which can be used in packaging (column lines 10-12), and the presence of fragrances and energy absorbing ingredients is well known in the art (abstract, column 4, lines 17-31). Therefore, it is the examiner's position that at the time of the invention it would have been obvious to a person of ordinary skill in the art to add a fragrance and/or an energy-absorbing ingredient to the hot melt adhesive of Mehaffy because the use of such ingredients is well known, as taught by Baetzold.

Applicants disagree.

The remarks made above regarding Mehaffy are equally applicable here. Baetzold is directed to encapsulating an ingredient in a hot melt adhesive composition. Baetzold teaches that the encapsulated ingredient may be any known hot melt adhesive formulation ingredient or additive such as antioxidants and fragrances (abstract). The disclosure of Baetzold adds nothing

to the disclosure of Mehaffy which would motivate the skilled artisan to formulate an adhesive that can be applied at a temperature below 250°F and which are able to withstand stress at temperatures substantially closer to the temperature of the adhesive's application temperature than heretofore achieved in the art, i.e., the bonded adhesive heat stress value and the adhesive application temperature are separated by 100°F or less.

Withdrawal of the Section 103 rejection of claims 6 and 7 based on Mehaffy in view of Bactzold is requested.

Withdrawal of the rejections of record and notification of allowance is requested.

Respectfully submitted,

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September 8, 2009

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